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Alternative Forms of External Finance

A Survey

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Alternative forms of external finance for developing countries have increased in importance in recent years. This paper identifies research that could help official creditors define their role in a world with increased capital mobility — and would be consistent with their increased emphasis on developing the private sector.

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This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in the Department to analyze alternative forms of financial flows to developing countries to determine ways of enhancing the quantity and quality of external resources in support of development. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheila King-Watson, room S8-040, extension 31047 (37 pages). December 1991.

Classens identifies several gaps in the literature on external financing for developing countries. Theoretical and empirical research in three areas could help the World Bank and other official creditors define their role in a world with increased capital mobility — and would be consistent with their increased emphasis on developing the private sector. The three areas are:

- *The differences in country risk between alternative forms of external financing ("alternative financing") and traditional financing.* This research would help assess the type and amounts of alternative financing consistent with an (explicit or implicit) enforcement of contracts and the institutions needed to assure the proper treatment of claims.

- *Incentive structures for, and restrictions on, alternative financing in the host country.* Research could focus on the efficiency of these schemes from the country's perspective, and could identify the best incentive structures for attracting the desired amount and type of foreign capital. This would help countries design better policies on domestic regulations, taxes, accounting, institutions, and performance incentives. Research should address such issues as the appropriateness of ownership and capital controls, the enforcement of private-to-private contracts, the monitoring of external private-to-private contracts, the decision to allow foreign banks to enter a country, the design of appropriate financial instruments, and the appropriateness of investment incentives.

- *Optimal participation modes of international firms in developing countries.* This research could focus on the (optimal) capital structure of a multinational corporation seeking financing from domestic and foreign capital

markets, under the constraint that capital in the host country is mobile. Researchers could investigate how international firms should finance (and have been financing) themselves and whether there have been shifts in these patterns; develop contracts that deal with problems of moral hazard and sovereign risk; and discuss the multinational corporation's intermediation role and the possible restrictions a government should impose on private-to-private financing.

Current literature does not offer official creditors much analytical support about the preferred forms of financial intermediation or their possible support role for private sector financing (cofinancing, guarantees, privatization, and how to get comfortable adherence to private-to-private claims). Official creditors may have trouble defining their roles when they don't have a clear idea of the differences between alternative financing and traditional financing, don't know when one or the other is called for, or the implicit seniority status of different claims.

Research in these three areas would help improve official creditors' policy advice, their efficiency as intermediators, and any activities associated with private-to-private lending. The World Bank and other creditor institutions are often involved in policy advice on domestic reforms often aimed largely at attracting foreign finance — either by developing appropriate instruments or by providing enough comfort so that countries can adhere to performance requirements on projects. They cannot afford to duplicate systems that already exist and need to take into account specific situations in developing countries.

The Policy Research Working Paper Series disseminates the findings of work under way in the Bank. An objective of the series is to get these findings out quickly, even if presentations are less than fully polished. The findings, interpretations, and conclusions in these papers do not necessarily represent official Bank policy.

Table of Contents

1.	Introduction	1
2.	A Brief Overview of Some Key Aspects of Alternative Forms of External Finance.	4
	I. FDI	4
	II. Equity Portfolio Investment	7
	III. Private Non-Guaranteed Debt	7
3.	Differences between Traditional and Alternative Forms of External Finance	9
	I. Public vs. Private Obligation	9
	II. Type and Source of Capital	9
	III. Purpose of Capital Transfer	9
	IV. Links Among Capital Providers and Among Capital Receivers	10
	V. Links Between Projects and Capital Providers	10
4.	Factors Determining Capital Flows: Traditional vs. Alternative Forms of External Finance	11
	I. Real Factors in the Host Country	13
	(a) Determinants of Investments	14
	(b) External and Domestic Financial Intermediation	15
	(c) Economic vs. Financial Rates of Return	16
	II. Real Factors Arising from Interaction Between Debtor and Creditor	16
	(a) Interaction through the MNC	16
	(b) Managerial Control and Capital Structure	18
	(c) The Nature of International Liability and the Social Benchmark of Investment	19
	(d) Financial Intermediation in the Developed World	20
	(e) Effects on the Balance of Payments	21
	III. "Government Policies" in the Host or Source Country	22
	(a) Incentive Schemes	22
	(b) Tax Treatments	23
	IV. Country Risk Factors	23
	(a) Selective Expropriation and Reputation	24
	(b) Assumption of Private Claims	25
	(c) Analytical Modeling of Country Risk	26
5.	Summary	28
6.	References	30

ALTERNATIVE FORMS OF EXTERNAL FINANCE: A SURVEY

1. INTRODUCTION¹

In the eighties many developing countries had to make major corrections in their external balances, associated with cuts in domestic investment, in response to drastic reductions in net voluntary commercial bank lending. After a decade of unsuccessful attempts to restore growth through concerted, involuntary provisions of new money by commercial banks, the accepted policy for managing the external debt problems of most developing countries is, among others, through commercial bank and official debt reduction.² The expectation of most participants is that voluntary lending by commercial banks to governments for balance of payments purposes will not be forthcoming in the near future for those countries that have engaged in or are possible candidates for debt reduction (and only in limited amounts for most other countries). The main sources for sovereign lending (lending to the public sector) will be official creditors and multilateral institutions and net transfers from commercial banks to developing countries will be sharply negative.

Net transfers from the public sector of developing countries (to commercial banks) has raised the importance of forms of external finance alternative to lending to the public sector (balance of payments lending and other forms). We use here the phrase "alternative finance" (AF) to capture all the forms of external financing outside the public sector. Financing to the public sector is called "traditional finance" (TF). AF thus includes foreign direct investment (FDI), project lending, portfolio investment, closed-end equity funds, private non-guaranteed debt, licensing, joint ventures, quasi-equity contracts, and other forms of private-to-private lending.³ For the group of Severely Indebted Middle Income Countries (SIMICs)⁴ more than 60 percent of net resource flows was already from AF sources in 1989 and this share is expected to increase in coming years. Similar trends exist for other groups of countries (see for instance World Bank 1990/1991).

AF is likely to take on an increased importance for a number of reasons. First, the experience of successful developing countries shows that TF is being substituted by AF as the country develops. This indicates that future financing to other developing countries will also

¹ I would like to thank Jonathan Eaton, Donald Lessard, Lemma Senbet, George Anayiotos, Harry Huizinga, Ishac Diwan, Sweder van Wijnbergen, Vikram Nehru, Guy Pfeffermann, participants in a Bank seminar, and anonymous referees for helpful comments and contributions.

² There exists conflicting empirical evidence regarding the existence of a debt overhang and the resulting need for debt relief. See for instance IMF (1989) and Hofman and Reisen (1990) for two different findings.

³ Since FDI has represented and will likely represent the largest component of AF, we rely mostly on FDI numbers for the quantitative section (Section 2 of this paper). The paper covers, however, all forms of AF.

⁴ This group includes: Argentina, Bolivia, Brazil, Chile, Congo, Costa Rica, Côte d'Ivoire, Ecuador, Egypt, Honduras, Hungary, Mexico, Morocco, Nicaragua, Peru, Philippines, Poland, Senegal, Uruguay and Venezuela. See further Table A1 in Global Economic Prospects (1991).

have to be different from the past.⁵ Second, many developing countries are opening up their markets, privatizing, and reforming their economies. These countries will have economic systems not unlike some of the OECD countries, have more developed domestic financial systems, and, most importantly, have different roles of the state. At the same time, however, many of these countries will face a (external and internal) claim overhang. Financing in this situation will have to look different from the past. Third, and related, point is that the opening up of these economies means that local capital will increasingly be exposed to competition from abroad. Since domestic capital will be internationally mobile capital, linkages between external and internal finance will become more important. AF is more likely appropriate in such circumstances since with AF the external to internal linkage is direct, whereas with TF it is only via the government. Fourthly, AF can have important added benefits such as risk-sharing features, performance incentives, and linkages with developed countries' goods and capital markets, which makes it more attractive to both the country and the capital provider. Lastly, there can be important spill-over effects of AF on the development process of a country, e.g. through transfer of new technology. The new growth literature has drawn more attention to the importance of these spill-over effects, and thus to AF, which often comes as a package of capital, technology, and know-how.

From the World Bank's point of view, AF is important for a number of additional reasons. Firstly, most middle-income countries will need access to AF to support their resumption of sustainable economic growth. With a decline in TF, the importance of AF, both in aggregate and in terms of their impact on the country's development process (and also on the Bank's exposure), is significant. Secondly, while these flows involve private-to-private financing, they may require international institutional support. This can be in the form of developing the necessary domestic environment for these instruments--as through the Bank's work on domestic financial restructurings, liberalization, foreign investment policies, reform process, tax policies, etc.--or in the form of the development of new financial instruments or through providing the necessary comfort at the project level or sovereign level.

The increased importance of AF from the Bank's and countries' point of view raises a number of questions like: what determines these flows; what is the importance of country risk factors; how can these flows be influenced and increased; and how can they be put to their best use. However, the tools to answer these questions are lacking since relatively little analytical and empirical research has been done on AF in recent years. This is an area where much of the major research effort was undertaken in the 1960s and 1970s; most recent research on external financing has been concentrated on sovereign debt.⁶ This is partly a reflection of the fact that the (real) value of AF did not increase over the period 1970 till mid-1980s while the (real) value of lending did increase (it grew at rates close to 10% during the 1970s in real terms). Transfers on lending dominated those on AF during the 1980s. As a result, much of the analytically based

⁵ This also means that a "black box" approach, as often used for sovereign debt analysis, will not suffice for analyzing the sustainability and country risks aspects of AF.

⁶ The gaps in the literature are large. For example, in the World Development Report (WDR) 1989 only one page was devoted to external financial policy. Lessard and Williamson (1985) and WDR 1985 still represent the most comprehensive surveys.

research on AF dates before 1980. Furthermore, the earlier literature dwelt largely on the underlying motivations for capital transfers (call them "real" factors) and less of it was specifically concerned with the impact and nature of country risk aspects. Even though issues such as political risks and expropriation were of course discussed, this was rarely done using analytical models. In contrast, TF research, which has increased dramatically over the last decade, concentrated on sovereign risk (the "sovereign" factors). Underlying motivations for capital transfers to developing countries (the "real" factors) were most often assumed in this literature instead of explicitly modelled. In practice, both real and country risks factors will influence TF as well as AF.

The main purpose of this paper is to survey the existing literature on AF and indicate the major research gaps. In this way, the survey may help to identify the factors influencing the flow of AF, provide analytical--and empirically supported--underpinnings for policy work and for an assessment of the amounts likely to be available. The focus of this survey is on aspects of country risks related to AF and the dispute settlement of international claims (where it discusses the value of the sovereign risk analysis of TF for the analysis of AF), domestic incentive schemes to attract foreign financing, the intermediation role of multinational firms and banks, and the supply side of AF. The survey thus investigates the incentives for individuals and firms; only where necessary, aggregate implications are taken into account.⁷

The outline of this survey is as follows. Section 2 provides some descriptive statistics of AF and makes a comparison with TF. Section 3 identifies the key characteristics in which AF differs from TF. Section 4 first briefly reviews the factors motivating capital flows. This section next identifies the extent to which TF and AF differ in the factors motivating capital flows and to what extent the implications of these differences have been explored in the literature so far. Section 5 summarizes the survey and section 6 provides the references.

⁷ The survey focuses less on the motivations for foreign investment identified in the literature, (such as firm specific advantages, internalization of advantages, multiplants versus multifirms versus multicountry firms) and occasionally assumes that the basic motivations for foreign investment exist.

2. A BRIEF OVERVIEW OF SOME KEY ASPECTS OF ALTERNATIVE FORMS OF EXTERNAL FINANCE

To set the stage for a discussion of AF, we present first some (aggregate) statistics on AF and TF, and highlight some of the similarities and differences between patterns of TF and AF. The statistics will confirm the relevance of the distinctions made in section 3 and provide the background for the survey of section 4. We divide AF into three categories: foreign direct investment; equity portfolio investment (including country funds); and private, non-guaranteed debt. We start with some aggregate statistics on FDI flows and stocks, since FDI has been the largest among the AF, and will compare these numbers to public external debt.⁸

I. FDI

Even though substantial differences exist among individual developing countries, some general patterns emerge. Stocks of FDI are in general lower than debt stocks.⁹ The total amount of FDI claims in 1988 on all developing countries was approximately 11 percent of the total amount of debt claims. The average ratio of FDI stocks to GNP (FDI/GNP) of all developing countries was only 10%, while the average debt to GNP ratio (DOD/GNP) is 83%. FDI/GNP exceeds DOD/GNP for only a few developing countries (e.g., in 1988 only for Botswana and Trinidad and the suspicion is that the data were unreliable in those cases). The standard deviation in FDI/GNP across countries is also much less than the standard deviation in DOD/GNP; in 1988 the standard deviation in the ratios was 13% versus 68%.¹⁰ The maximum FDI/GNP is 47%, the maximum DOD/GNP is 450%. The coefficient of variation was however much larger for FDI/GNP than for DOD/GNP, 1.35 versus 0.822, indicating that relatively speaking there was more variation in the ratio of FDI to GDP.

FDI stocks tend to be concentrated in a small number of developing countries. For instance, more than 63 percent of the total stock of FDI claims in developing countries was in 5 countries (Brazil, Mexico, Egypt, Malaysia and China), whereas these 5 countries only accounted for 28 percent of total debt claims on developing countries. In contrast, the top 5 borrowers in debt (Brazil, Mexico, Argentina, India and Indonesia) accounted for only 33

⁸ We will argue in section 3 that this is not necessary a sensible comparison from an economic point of view. The purpose here is just to indicate the absolute and relative magnitude of both measures and indicate some salient differences.

⁹ Reliable numbers on FDI stocks are difficult to obtain, partly because of problems with data but also because it is difficult to calculate the market value of FDI. The method used here was to sum over time the net annual FDI flows (from the OECD data bank) from the earliest year data were available (generally around 1965). The data obtained were largely consistent with those reported by other sources (which may use the same method), such as the US Department of Commerce and the IMF. "Non-bona fide" developing countries, which often merely serve as conduit for FDI to developed countries, such as Netherlands Antilles, are excluded. See also IFC (1989).

¹⁰ It should be remembered that for some developing countries FDI/GNP was actually negative (e.g. Venezuela), increasing the standard deviation. Developing countries which are net creditors on account of debt are excluded.

percent of total debt stocks, or half of the share of total FDI of the top 5 FDI-countries.¹¹ Some similarities exist among the countries with relatively high amounts of FDI claims (such as a broad natural resource base and a large domestic market). However, these similarities cannot easily be generalized since several countries with such characteristics do not have large amounts of FDI stocks (e.g., India and Indonesia).

FDI flows to developing countries have come almost entirely from a small group of developed countries and there is little intra-developing country FDI flow. The largest direct investors in developing countries are companies from United States, United Kingdom, Germany, Japan and France.

FDI flows consist of new equity, retained earnings and intercompany loans. It is not clear what determines the division between these three components and there has been great variation in the relative contributions of these three components.¹²

The external debt of a country tends to be closely related to its per capita income. This runs counter to the view that, since marginal rates of return are higher in low per capita income countries, foreign capital should flow relatively more to low per capita income countries, and that therefore debt stocks per capita should be relatively higher for low per capita income countries (see Gertler and Rogoff (1989)). A similar positive relationship also holds for per capita FDI and GNP. In fact, across countries FDI per capita tends to be even more sensitive with respect to GNP per capita than DOD per capita is. For example, the elasticity of FDI per capita (FDI/CAP) with respect to GNP per capita (GNP/CAP) across developing countries is much higher than the elasticity of DOD per capita (DOD/CAP) with respect to GNP/CAP. For 1988 the elasticity of FDI/CAP with respect to GNP/CAP was 1.5 while the elasticity for DOD/CAP was only 0.84.¹³ Similar results for the magnitudes of the elasticities are obtained for other years, across (regional) groups of countries, and for individual countries over time (even though in the last case, the explanatory power is, of course, limited).¹⁴

¹¹ These 5 countries account for 47 percent of total FDI stocks, but the top two (Mexico and Brazil) account together for 38 percent. The share of an individual country of the total world FDI stock and the share of the total debt stock are closely correlated ($R^2=0.83$).

¹² For example, during the 1980s the share of intercompany transactions among parent and affiliate companies of multinational firms as a proportion of total FDI flows exhibited significant variation. In addition, these three components have at times moved in opposite directions. For example, total FDI flows for the USA varied between an inflow of \$2.4 billion in 1982 to an outflow of \$44.5 billion in 1987. Equity capital has varied from an inflow of \$2.2 billion in 1985 to an outflow of \$9.7 billion in 1982. Reinvested earnings have varied between an outflow of \$1.4 billion in 1982 to an outflow of \$35.7 billion in 1987 and intercompany debt has varied between an inflow of \$13.4 billion in 1982 to an outflow of \$1.3 billion in 1985.

¹³ The explanatory power is quite good, R^2 is generally above .50 for FDI/CAP and is around .65 for DOD/CAP on GNP/CAP.

¹⁴ The close correlation between debt as well as FDI levels and GDP does, of course, not indicate the nature of the causality: whether external capital leads to higher GDP (growth) or whether higher GDP (growth) allows for a larger amount of external capital. See further Caves (1983), Chapter 9 for a critical overview of studies of this relationship.

Countries with debt servicing difficulties had significantly lower FDI/GNP ratios and significantly higher DOD/GNP ratios, before their debt servicing problems occurred.¹⁵ Also, non-SIMICs as a group relied relatively more on FDI as a source of external financing during the period 1976-1981.

Defaults on debt do not necessarily coincide with defaults on FDI and vice-versa. In fact, countries have seldom defaulted (explicitly) on their external debt and FDI claims at the same time. Creditors and investors have considered defaults on debt and FDI as manifestations of sovereign risks which are largely separable. Several developing countries expropriated FDI in the 1960s and 1970s.¹⁶ At the same time, creditors were willing to provide the same countries with large amounts of credit. In the 1980s, the opposite happened; when many countries defaulted on debt de facto, only a few countries expropriated FDI.¹⁷

Large amounts of FDI or credit have not flowed to developing countries at the same time. Either FDI or credit tended to dominate at different points in time. For example, external financing to developing countries in the second half of the 1930s was largely characterized by debt-creating flows; while the 1950s were dominated by large amounts of FDI. In the 1970s, of course, loans were predominantly used, and the real value of debt-creating finance increased by about 10% a year. The real value of FDI flows on the other hand did not change between 1967 and 1982.

The cost of servicing FDI is in general higher than the cost of serving debt. The rate of return on U.S. FDI in developing countries (the only developed country for which detailed data are available) over the period 1980-1986 was 16.2%.¹⁸ Considerable differences existed among individual countries and country groupings: Latin America's rate was the lowest (12.2%) and Asia's the highest (28.5%). As a comparison, the rate of return on FDI in developed countries over the same period was 12.2%. This could also be compared to the average cost on debt from commercial sources during the period 1980 to 1986 for developing countries which was 9.7%.

The rates of return on FDI are in general positively related to the host country's exports and GDP growth rates. The relationship between international interest rates and developing

¹⁵ Again, the nature of the causality is unknown since relatively higher FDI/GNP ratios and lower DOD/GNP ratios can equally well be interpreted as ex-ante indicators of the prospects of the country, and thus the likelihood of debt servicing problems, as they can be interpreted as mechanisms which ex-post prevented debt servicing problems from occurring.

¹⁶ Approximately 20% of the value of all FDI carried out between 1956 and 1972 was expropriated without compensation in this period (see Williams (1975)).

¹⁷ It can be argued that the value to the country of expropriating FDI claims has declined in the 1980s since the costs (and corresponding opportunity value) of servicing the FDI claims has declined as profitability has fallen. This can however only be partly correct since the opportunity costs of not expropriating must have risen in periods of shortage of foreign exchange. Possibly, linkages between the two types of default occur because of the domestic political system.

¹⁸ Calculated as the direct-investment related payments (i.e., dividend and interest plus reinvested earnings) as a percentage of the estimated stock of direct investment outstanding (obtained from US Department of Commerce).

countries' growth rates of exports and GDP has been insignificant or negative.

Countries with higher FDI/GNP ratios tend to have higher domestic real interest rates and countries with higher DOD/GNP ratios tend to have lower (negative) real interest rates. This may indicate that there exist a link between the structure and efficiency of the domestic financial system and the type of external financing that is attracted. It relates to the observation made earlier that FDI/GNP and DOD/GNP ratios for countries with and without debt servicing difficulties differed, since the relationship between real interest rates, growth, and debt servicing problems is well documented (see Gelb (1989) and WDR 1989).

II. Equity Portfolio Investment¹⁹

Foreign investors have directly invested only small amounts in the stock markets of developing countries (through the acquisition of up to 10% of the shares of an individual company). The largest portfolio investments have been made indirectly through the use of so-called country funds. The total net asset value of country funds invested in developing countries in 1989 is estimated to be \$7 billion. The investments are concentrated in a few developing countries (particularly the Newly Industrializing Economies (NIEs),²⁰ see further IFC (1990)). These funds represent about 2% of the total stock market capitalization of all developing countries (estimated to be \$400 billion at end-1989 or 4% of the capitalization of developed stock markets).²¹

Dollar rates of return on developing countries' equities tend to be high, but volatile. The IFC composite rate of return on developing country equity over 1984-1989 was 25.7%, or 2.5 percentage points above an index of world equity markets (the Morgan-Stanley Capital International Index). Rates of return for developing countries tend to be more volatile than for the world equity index. Rates of return also tend to have a low correlation with the rates of return in developed country markets (on the order of -.1 to .3).²²

III. Private Non-Guaranteed Debt

Data are less easily available in other forms of AF. Many developing countries do not keep data on non-guaranteed debt incurred by private companies and creditor countries often do not even make the distinction between the two. OECD data on funds raised by developing countries in the form of bond issues and other capital market instruments (such as commercial paper programs, some non-underwritten facilities and other backup facilities) include public as

¹⁹ On equity portfolio investments, a relatively large information is available, especially on country funds (see for instance van Agtmeal (1984) and the Emerging Capital Markets Handbooks of the IFC, 1989 and 1990 editions).

²⁰ This group includes: Hong Kong, Korea, Singapore and Taiwan.

²¹ The total market capitalization is heavily concentrated in a few countries. Korea and Taiwan, for example, together account for 57% of the market capitalization of all developing countries.

²² See Diwan and Galindez (1991).

well as private issues. For example, the total amount of such flows was \$7 billion in 1990.²³ These forms of finance have increased in absolute and relative amounts, in part because many developing countries have liberalized private sector (and some state-enterprise) borrowing.

The \$7 billion total of private and public issues compares to gross debt creating flows to developing countries of \$26 billion in 1990. This \$7 billion figure, however, includes forms of finance which are general obligations of the governments or state enterprises. Genuinely AF (bonds with equity warrants, shares and private, non-guaranteed obligations) account for a much smaller percent of total funds raised by developing countries.

On a stock basis, it is estimated that total private, non-guaranteed debt claims are about \$150 billion, or only about 11% of public and publicly-guaranteed claims of \$1350 billion of all developing countries (1990 figures).

²³ Of this, international backup facilities (commitments by banks to underwrite instruments that cannot directly be placed) amount to about \$1.7 billion (in gross terms, not subtracting facilities used in the context of debt reschedulings and including South Korea).

3. DIFFERENCES BETWEEN TRADITIONAL AND ALTERNATIVE FORMS OF EXTERNAL FINANCE

The aggregate statistics of section 2 indicate that there are substantial differences between the amounts and distribution of TF and AF and the rates of return they earn in developing countries. The type of external finance and the country's economic performance are also closely related. The first step to sharpen the analysis is to identify where and how TF and AF differ. For those aspects in which TF and AF are similar, policy recommendations can build on the stock of knowledge on TF. To the extent they differ, new tools for analysis, management and forecasting will be necessary.

TF and AF differ in the following ways (the differences may overlap to some extent):

- I) Private versus public obligation;
- II) Different type of obligation and source of capital;
- III) Different purpose of capital transfer;
- IV) Different links among capital providers and among capital receivers; and
- V) Different links between projects and capital providers.

We will first expand on each of these differences, and then in the next section indicate the possible implications.

I. Private versus Public Obligation

TF involves a public (or publicly-guaranteed) obligation and AF involves private (non-recourse) obligations. The distinction is important in many respects since it reflects on the allocation of external resources received, the internal and external transfers necessary to service the debt claims, the sovereign risk aspects, the destination of capital, etc. The most important difference will be the fact that public debt involves an external as well as an internal transfer (positive as well as negative) while private-to-private claims involve only an external transfer. This is important since the benefits and costs of public external financing are allocated through the internal transfer.

II. Type and Source of Capital

The two forms of finance differ in the type and source of capital in three ways:

First, TF has been provided in limited forms over the last several decades. Of overwhelming importance has been general-obligation (i.e., debt) finance. Sovereign debt is usually lower cost and involves a large degree of control by the borrower. But it implies little risk-sharing between lenders and borrower and little incentives for selecting and monitoring projects. The size of debt owed to international commercial banks in the early 1980s dramatically highlighted how risks could be concentrated within a small group of financial

institutions and pose a serious threat to the stability of the international financial system.

Second, TF largely involves only a transfer of capital whereas AF often involves a transfer of capital combined with technology, know-how, goods, human capital, etc.²⁴ This package can greatly influence the expected rate of return for the investor and the country.

Third, if capital markets are imperfect in the country providing the capital, the type of external finance can depend on which sector generates the savings.²⁵ With imperfectly functioning capital markets in the developed countries, for example, FDI may depend on the amount of savings generated internally in (multinational) firms.

III. Purpose of Capital Transfer

TF and AF differ according to the final purpose of the capital transfer, i.e., project or expenditure financed. The distinction arises in part from the difference in the borrower (private versus public) and the associated objective function used when evaluating investments. Whereas public investments (TF) can include projects where economic rates of return are high but financial rates of return are low (infrastructure, education), private investment (AF) will be directed to projects where financial rates of returns are high.

IV. Links Among Capital Providers and Among Capital Receivers

The links among the providers of TF are more explicitly defined. For example, commercial banks' syndication agreements, which cover a large share of debt financing to sovereign borrowers, include sharing clauses which entitle each lender to an equal share of any payment received by any syndicate member. Such clauses achieve a uniform class of creditors and reinforce a high degree of cohesiveness among lenders. Moreover, projects financed with TF are linked through the internal transfer associated with a sovereign claim, putting all TF claim holders on the same status. AF claims holders seldom treat failure to honor one claim as default on other claims (according to contractual obligations). The degree of interdependence among capital providers and receivers is created by AF is thus considerably different compared to the interdependence created by TF.

V. Links between Projects and Capital Providers.

The rate of return on the project ultimately financed bears virtually no relationship to the interest/return on the capital for TF. In AF, however, the relationship is usually close, or, as

²⁴ This package content of AF will especially be true for FDI and project finance, but equity portfolio investments and non-guaranteed debt will also have some externalities.

²⁵ The word imperfect only means that there exist barriers, some of which are institutional and artificial, other which are natural (such as an asymmetry of information), that prevent a perfect mobile flow of capital among intermediaries in the developed world and an equalization of expected rates of return across countries.

Lessard (1986) has called it, the foreign managerial penetration is high. This concerns not only situations of default, but also the more general incentive of the capital provider to assure that the project financed is a success.

4. **FACTORS DETERMINING CAPITAL FLOWS: TRADITIONAL VERSUS ALTERNATIVE FORMS OF EXTERNAL FINANCE**

Why do creditors and borrowers choose AF? And how do these reasons differ from those that make them choose TF? Capital flows across borders because it helps borrowers and lenders.²⁶

- a) Enhance income over time;
- b) Accelerate or decelerate income and consumption over time; and
- c) Transfer risks (income across circumstances).

Smooth, accelerate or decelerate income or consumption objective involves the building up of debt or reserves in response to anticipated movements in income over time (see for instance Cooper and Sachs (1985)). This can be compared to accumulating debt or reserves by individuals over their lifetime in accordance with the permanent income or lifecycle hypotheses. TF makes this possible through the accumulation and decumulation of debt and reserves. A good part of the borrowing during the 1970s was probably motivated by a need to accelerate and smooth consumption (often in association with commodity booms). When viewed ex-post, however, borrowings appeared to have been more procyclical than countercyclical and little smoothing was accomplished.

The transfer of risks from developing countries to developed capital markets (c) has only recently received attention as a key objective of capital flows.²⁷ TF is ill equipped to insure debtors and creditors against risk.²⁸ AF may be better equipped to do so--given its contingent payment obligations--and in that way may avoid some of the welfare and deadweight losses associated with fluctuating incomes and postponed investment decisions.²⁹

Developing countries have sought capital inflows primarily because they wished to increase their permanent income.³⁰ This requires that developing countries possess investment

²⁶ See for instance Lessard (1985).

²⁷ This is also what motivates capital flows among developed countries. Even though the advantages of international diversification of finance had been pointed out before (in the finance literature), only recently has the interest of financial markets in international diversification increased and have market participants in developed countries diversified their financial holdings among developed countries on a larger scale on this account.

²⁸ The general properties of consumption smoothing contracts are derived in, among others, Kletzer (1989) and Kletzer, Newberry and Wright (1990). An interpretation of these contracts in financial instruments often results in a combination of existing financial instruments (indexed contracts, loans, options) and sometimes new instruments. Since these analyses have been done in the context of a representative agent model, no distinction was made between public and private obligations. For an analysis of the optimal contract in a model with risk sharing and moral hazard see Atkinson (1988).

²⁹ Under certain circumstances, an increase in uncertainty will lead investors to postpone investments (see further Servén and Solimano (1991a and 1991b)).

³⁰ See, for instance, Fishlow 1990.

opportunities profitable by world standards which together exceed the availability of domestic savings. TF as well as AF is used for this purpose. We will in the remainder concentrate on this issue of profitable investment opportunities.³¹

Four types of factors affect the profitability of investment opportunities in developing countries:

- I) Real factors in the capital receiving (i.e., host) country;
- II) Real factors which arise from the interaction between the host country and the capital provider;
- III) Government policies in the host or source country; and
- IV) Sovereign risks factors.

For TF the research has largely concentrated on factors I) and IV). We will see that for AF factors II) as well as III) also affect flows, but have not been researched thoroughly.

I. Real Factors in the Host Country

For capital to flow across borders, the risk-adjusted real rate of return in the capital receiving country must be higher than in the capital providing country.³² The higher rate of return can be due to a number of reasons. These could include different factor endowments--lower wage costs, more natural resources, lower transportation costs, lower initial physical capital stock, lower initial human capital stock, etc. According to neo-classical theory, differences in factor endowments are required to make an initial transfer of resources a sustainable strategy (sustainable in terms of satisfying some specific solvency constraint).³³ Such external financing was used, for example, by the U.S. for building the transcontinental railroads in the late 19th century, by West-European countries after WWII, by Brazil in the mid-1960s to develop its export-oriented industry, by many of the South-East Asian countries in the 1970s and in general underlies lending by development agencies (see further for instance Lessard (1986) and (1988)).

Recent work on trade stresses increasing returns to scale as a motivating factor for trade, which can thus also be a motivating factor behind capital flows. Some of the most recent contributions in this area have focussed on the role of intermediate goods as a mechanism for

³¹ Some have called the transfers of resources on account of higher rates of return also a desire for consumption smoothing, not in light of anticipated or unanticipated exogenous movements in incomes, but in light of profitable current investment opportunities.

³² Note that it is usually presumed in the sovereign lending literature that the rate of return is larger in the developing country, rather than explicitly argued for on the basis of development process and/or relative factor endowment. For AF, in particular FDI, the concentration has often been exactly on defining the reasons for the higher rate of return. Risk, which will play an important role, will be treated separately later. For the moment we consider the expected rates of return only.

³³ The literature addressing the issues in this area is voluminous (see Jones and Kenen (1988), WDR 1985 and WDR 1991).

transferring "know-how" to developing countries (Grossman and Helpman (forthcoming)). Similarly, the "endogenous" growth literature has stressed factors contributing to growth other than physical capital, e.g. human capital, trade in intermediate goods, and externalities associated with physical investments (Easterly and Wetzel (1989)). The full implications of the endogenous growth literature for examining external capital flows has yet to be explored fully (see Spiegel (1989) and Arrau (1990) for some initial work). In particular, it needs to be explored in more detail as to why capital, technology and other factors may not flow to their most productive usage.³⁴

a) Determinants of Investments.

Many of the factors that determine the real return for foreign investors also determine the real rate of return for domestic private investors.³⁵ For example, factors, such as the macroeconomic environment, the credibility of exchange rate policies, the quality of fiscal policies and the interaction between public and private investment, can be equally important for domestic as well as foreign investors (see Serven and Solimano (1991a), Green and Villanueva (1990) and Shariff (1990)).

There will, however, be some factors such as exchange rate policies, that could affect private domestic investment and foreign private investment differently. Other factors include regulations regarding the share foreign investors can take in domestic firms, rules governing remittances of interest and dividends, performance requirements (e.g., on the domestic input content), and transfer pricing rules.³⁶

General overviews of the influence of these factors on foreign private flows are IMF (1985) and Lizondo (1990). We will focus here on two issues that deserves some special attention: the link between external and internal financial intermediation; and the distinction between economic and financial rates of return.

b) External and Domestic Financial Intermediation.

The efficiency and development of a host country's financial system can have important

³⁴ The work on endogenous growth has been able to identify different factors contributing to growth and the work may challenge the hypothesis that, in the absence of any barriers or frictions to cross-border capital flows (including any informational problems and sovereign risk factors), capital will flow towards the country with the higher rate of return until eventually rates of return are equalized. Spiegel (1990) has found, for instance, that in an endogenous growth model it may require a critical mass of foreign borrowings to reap these higher rates of return.

³⁵ The fact that the factors determining the real rate are the same for both does not make the relative attractiveness of investing for the capital short and capital abundant the same.

³⁶ In addition, many (developing) countries have used specifically designed incentive schemes to attract foreign investors. These factors will be discussed further below in the section on nominal factors.

implications for external financing. It appears, for example, that domestic financial development often precedes a larger inflow of AF. Korea, Turkey and Indonesia, which recently liberalized their domestic financial systems, have seen a larger inflow of AF accompanied by foreign banks locating in the country and providing intermediation services.³⁷ Brazil, which has had a more developed domestic financial system, has attracted AF earlier on. Recent flows of AF have gone to investments in financial intermediation services (and real estate), as in the case of South-East Asia. These flows have been, in part, responses to the opening of the domestic banking sector to foreign investments.³⁸

Only a few research papers have formally investigated linkages between the forms of external financial flows and the host country's institutional (financial) structure. They have built on new research on the linkages between the real and financial sector in a domestic context (for the latter see for instance Bernanke and Gertler (1983) and Gertler (1988)). One such paper is Froot and Stein (1991), which focuses on the link between the structure of financial systems (asymmetry in information) and forms of external finance (FDI) and provides evidence that the form of cross-border investment is affected by exchange rate changes.³⁹

Reverse linkage between net external capital flows and domestic financial systems is, of course, through capital flight. The relatively ill-developed domestic financial systems in some Latin American countries are often mentioned as a reason behind the large amounts of capital flight (see for instance Lessard and Williamson (1987)). Other linkages are also likely to exist, as the extensive literature on the financial flows among developed countries shows (i.e., the models of exchange rate determination, interest parity, purchasing power parity, monetary policy, etc.). The important point is that domestic capital in many developing countries is (or will become) internationally mobile and that international capital has become more mobile, both of which will impose restrictions on the domestic financial system and made certain types of external finance more attractive.⁴⁰

³⁷ This excludes FDI in large mineral extraction projects (e.g. oil) which is largely independent of the domestic institutional structure. Indonesia for instance has used sophisticated external financial contracts for the exploration of its petroleum reserves, whereas it had at the time a relatively undeveloped domestic financial system.

³⁸ It is unclear however, whether this opening up of the domestic banking sector has resulted in facilitating a transfer of foreign capital beyond the initial investment in the sector and whether the traditional theories developed for FDI are applicable to this form of FDI too.

³⁹ They focus on the informational asymmetries involved in international capital flows. They conjecture that the increase in FDI in the USA in recent years by Japanese investors may be associated with the appreciation of the Yen which has made their wealth higher measured in dollars and allowed them to overcome some borrowing constraints (which arose because of asymmetries in information). Since they postulate that asymmetric information is more prevalent with FDI than with portfolio investment, the effect of the appreciation of the Yen during the period 1985-1988 was expected to be the strongest on FDI flows (in particular those directed at real estate). In that way the form of external finance (FDI) was dependent on the structure of the financial system (asymmetry in information).

⁴⁰ One way to look at this is as a portfolio problem of both foreign and domestic investor, and derive their preferred asset and liability stock positions.

c) Economic versus Financial Rates of Return.

TF and AF are often used to finance different purposes. AF is more limited in scope because both financial and economic rates of return need to be high.⁴¹ A drop in TF and an increased reliance on AF may therefore profoundly affect development processes. This has important implications. Official lending should be directed towards projects with high economic, but low financial rates of return (education, health, environment, infrastructure), and AF could be used, if available, to finance project with high economic and high financial rates of return (say in energy, manufacturing and industry).⁴²

II. Real Factors Arising from Interaction between Debtor and Creditor

Interaction between debtor and creditor may influence the rate of return on the project. For example, Multinational Corporations (MNCs) may decide to invest abroad to gain access to protected markets.⁴³ Interaction between creditors and debtors also lead to gains in efficiency. We will focus here on: a) the interaction through the MNC and b) the issue of managerial control and source of financing.

a) Interaction through the MNC

MNCs transfer technology and help diversify risks for its shareholders. We distinguish between two perspectives on the role of the MNC: an economics and a finance perspective.

Economic Perspective. In general, the economics literature tries to explain the decisions of multinationals on where to invest resources, source inputs and produce outputs, and also the existence of intra-sectoral, intra-firm and intra-industry trade (see Graham and Krugman (1990)). The conclusion that emerges is that economies of scale and scope, the factor content of foreign trade, the benefits of (vertical) integration offered by the multinational, the market structure in which the firm operates, and other dimensions which come along with the providers of AF (the transfer of non-tangibles between different plants) can be important factors in determining the total return and motivation for cross-border flows. The literature is still somewhat weak on issues like why price-collusion is an imperfect substitute for a multiplant firm, and why portfolio

⁴¹ Of course, economic rates of return are not necessarily as high as the financial rates of return. At the opposite, much attention has been given in the past to the possibility that FDI would amount to a form of exploitation of countries and financial rates of return to private investors would exceed economic rates of return.

⁴² In addition to economic versus financial rates of return, there is the issue of externalities across borders (environment) which requires a different form of finance. We will not discuss this here.

⁴³ It is interesting to note in this context that several developing countries which had successful development processes in the 1970s and 1980s which were financed in part by public external debt, have only very recently moved away from public borrowing towards alternative forms of external finance. Possibly, the move away from public external finance came only when investments with high economic, but low financial rates of return were made, and high economic as well as financial rate of return projects remained. Had these countries allowed for private borrowings earlier on, then government external borrowings may have been crowded out and high economic, low financial rates of return projects would not have been realized.

investments (without managerial control), exporting, leasing, joint ventures or licensing cannot perform the same functions as foreign investment.

What the literature does not explain well is why foreign investment is triggered by differences in factor endowment and market structures that happen to coincide with legal boundaries between countries. The literature has often identified multiplant with multicountry locations. This can only be correct if sovereign boundaries determine locational advantage. Krugman (1991) indeed stresses that this literature has been much more a literature of geographic location of industries across regions (as for instance across regions within the USA) than of investments across sovereign boundaries. The answer that barriers to factor movements and market imperfections likely coincide with country limits does not answer the question of why countries find it in their (mutual) interest to erect these barriers.⁴⁴ The sovereignty of countries itself--defined in the broadest sense as an inability to enter binding agreements--may be a logical explanation for erecting barriers and thus creating locational advantages. This sovereign factor as a reason for foreign investment--and not (just) as a constraint--has received little research attention.

In general, the research in this area may have had more impact on the behavior of multinational firms--how they can benefit from these factor and market imperfections--and little impact on promoting AF.⁴⁵ There exists an urgent need to translate this literature into policy advice--regarding domestic market structures, regulations, etc.--to achieve investments which are advantageous to both the multinational firm and the host country. Countries need to know which type of policies lead to AF flows that "exploit" the imperfections in a way that benefits their own development process as well as that of the multinational firms.

Finance Perspective. The finance literature has stressed the benefits of the MNC in terms of diversifying risks for its shareholders. To the extent that shareholders cannot (efficiently) diversify their portfolios (growth stakes) in other companies or countries but the MNC can, foreign investments by the MNC can lead to welfare and efficiency gains for the shareholders. This will of course be especially true if MNCs acquire or use non-traded goods which individuals cannot. For example, an MNC could acquire human capital by buying up a company with high technological skills and use it productively, something an individual would find impossible.

Errunza and Senbet (1981) broaden this diversification perspective by investigating the existence of monopoly rents associated with international operations due to imperfections in all

⁴⁴ Restrictions in labor mobility seem the most clearly drawn along sovereign lines (understandably so), but does not seem a sufficient locational advantage to explain all foreign investment. Tax differentials and product differentiation are often mentioned as a motivation for foreign investment. The first follows directly from sovereignty and the second does not require foreign investment.

⁴⁵ It is in this sense disconcerting to note that in text books on foreign investment for managers the imperfections are often mentioned as sources of ex-ante positive present value projects, and not the efficiency gains that can be generated.

markets (product, factor, financial and differential international taxation). They show that empirically there exists a systematic positive relationship between the current degree of international involvement and excess market value, even after adjusting for risk diversification benefits.

b) Managerial Control and Capital Structure

It was pointed out earlier that AF fosters closer managerial control by the foreign investor.⁴⁶ There are two possibilities: those cases of AF where the claimholder takes on (some of) the additional functions of manager (majority and/or minority stakes); and those cases where the managers are not the claimholders.

Where foreign investors are also the managers, they are usually involved closely on the selection of the project and in sovereign risk evaluation. As managers of the project, they ensure access to capital and export markets.⁴⁷ This high level of managerial control can have important implications for the amounts of financing sustainable since it releases an important incentive compatibility constraint, that is, the constraint imposed by the knowledge that, once funds are disbursed, the borrower's incentives to invest may be different than claimed before (see for example Aizenman and Borensztein (1989) and Claessens and Diwan (1990)).⁴⁸

If the foreign investor is not the manager, but is directly concerned about the performance of the project, the issue of managerial control will arise. The (implicit) capital structure of the firm then affects the incentive of the managers. The issue of managerial control has received considerable attention in the domestic corporate finance literature.⁴⁹ This "modern theory of the firm", which calls the complete set of contracts (labor, suppliers, distributors, etc.) a firm, draws the attention to the different factors that efficiently monitor the performance of managers and the discipline that the market for managerial services puts on the managers (see further Fama (1980) and Jensen and Meckling (1976)).

The research done on capital structure in a closed economy can provide some insights on the optimal financing (or participation) modes of an international firm once one incorporates country risk by adjusting the principal agent model used in sovereign debt analysis. Neither the corporate finance nor the sovereign debt literature are directly applicable to analyze the capital structure of an international firm. The scope for principal agent and moral hazard problems is

⁴⁶ Close linkages, and associated forms of risks sharing, should be distinguished from pledging or collateralizing assets of future receivables for the purpose of attracting external finance. The latter may be necessary to overcome some creditworthiness constraint, however, it does not need to affect the incentives of the manager.

⁴⁷ This aspect of managerial control is thus beyond the value of managerial know-how as an input to the production process and as a motivation for foreign investment.

⁴⁸ However, the fact that the MNC acts as the manager of the subsidiary, of course does not mean that the MNC will necessarily manage the subsidiary in the interest of the MNC's shareholders. It can just move the managerial problem one layer up.

⁴⁹ The literature got a major impulse from the article by Jensen and Meckling (1976). For a recent overview see Dreyfuss and Knopf (1988).

even larger in an international context than in a domestic context, especially since international liability is poorly defined. Yet, the representative agent model used in the literature on sovereign debt will not be applicable given the decentralized borrowing and repayment decisions and the possible externalities generated by private-to-private financing.

c) The nature of international liability and the social benchmark of investment.

International laws and practice on the nature and extent of foreign claimholders' liabilities are often vague and at best ill-defined. The ill-defined nature of international liability will influence the investment as well as the financing decision. In general, the private foreign financier will have an incentive to lay off some costs on the host society. The move to more market-oriented economies has reduced the possibilities of foreign investors exploiting distortions in domestic markets. But it has not overcome the problem generic to all limited liability investors. Limited liability firms can adopt excessively risky strategies with potentially adverse consequences for the country. In domestic firms, another stakeholder (e.g., labor) may prevent this behavior. But in case of international investments, no similar counterweight may exist.

Furthermore, the nature of international contracts is such that a borrower can default selectively on claims incurred for one project and dilute the value of existing claims by incurring new obligations. With TF the borrower cannot create different classes among its lenders.⁵⁰ This difference affects the amount of AF that can be borrowed. The nature of international claims also makes the relative ranking of claims uncertain, (this issue is most clear in the relative seniority of debt and equity claims), further complicating the managerial control function of the capital structure of a firm.⁵¹

The rate of return on an investment is sensitive to the capital structure when AF is involved. This is because AF lacks sharing clauses. Conflicts between different classes of claimholders can arise. As a result, profitable investments may not be undertaken in some cases, especially when the yield is not sufficient to service all outstanding claims in all states of nature.⁵²

⁵⁰ Similar to domestic corporate finance, the ability of a borrower to create multiple classes of claims and to make existing claimholders junior to new claimholders will diminish the attractiveness of lending to that borrower in the first place and lower the total supply of funds available. In domestic context clauses prevent the borrower from doing so.

⁵¹ An analogy exists here with the effectiveness of "me-first" and other priority rules in bankruptcy courts in domestic finance (see for instance Smith and Warner (1978)). These restrictions used in contracts to limit the conflicts among different classes of bondholders and between bondholders and stockholders are fitted in the literature on corporate control, and are derived in an endogenous fashion. Restrictions in a domestic context most often take the form of restrictions on dividend and financing policy and not on production or investment decisions. Possibly, deriving an endogenous seniority structure could be also done in an international context.

⁵² This line of reasoning was first used by Myers (1977) when discussing the effects of corporate borrowings on a firm's investment policies. He showed that the existence of preferred claims weakens the incentives of the shareholders of a firm to undertake good investment opportunities. With complete sharing clauses, the claim structure is homogenous and conflicts among different classes about investment policies cannot arise. Conflicts

So far these aspects has only been explored to a limited extent. John, Senbet and Sundaram (1990) show that limited liability leads to globalization of benefits and localization of subsidies. Eun and Janakiramanan (1990) show that the value of a partly internationally owned firm depends on the share of foreign ownership and that foreign and domestic shareholders do not act as an alliance to maximize the value of the firm. Hodder and Senbet (1990) show that in case of integrated international financial markets the agency costs of debt financing determine an optimal capital structure for an internationally operating firm which is fundamentally different from what the traditional corporate capital structure literature would predict. Both the implicit nature of contracts and the more varied types of claims can lead to more restrictions (on managers) in international contracts.

What really is required here is either the endogenous derivation of the optimal liability structure or an investigation of what existing (exogenous) financial instruments imply for an international firm competing for capital. The first approach has the advantage of being able to work along the lines of the optimal contract in the principal-agent framework used in corporate finance and sovereign debt analysis. However, its interpretation in terms of existing instruments becomes difficult. The second approach is generally used for domestic corporate finance and may more easily be adapted to an international context. From a policy point of view, what is important is whether the market place can adjust the capital structure of the firm in a way that leads to maximization of the value of the firm as well as an investment level which is efficient from the point of view of the host country.

d) Financial Intermediation in the Developed World.

Closely related to the issues of managerial control and capital structure is the availability of resources in the different sectors and institutions of source countries. The dominance of bank lending in the 1970s was, for instance, associated with the large amounts of oil dollars recycled through the banking system to developing countries. It has become clear that commercial banks, by nature, do not have the institutional setup and comparative advantage to intermediate capital with long maturities. Conceivably, these capital transfers could have been intermediated first (directly or indirectly) in the source countries to multinational firms which could have "added" their technology and other skills and then have invested in developing countries. Apparently the institutional structures and arrangements in developed and developing countries did not encourage such a possibility.⁵³ Similarly, the increase in foreign investment in the 1980s by Japanese firms has, among others, been associated with an increase in business savings in Japan, whereas total Japanese savings did not change much or even declined.

If financial intermediation is imperfect in developed countries (i.e., managerial control problems become too large), the availability of AF for developing countries will depend on the

between claimholders and country can still arise of course, since in some sense the country is the ultimate shareholder.

⁵³ See Goldborough (1979), Oman (1984) and IMF (1985). See also the WDR (1985), especially chapter 6, for an analysis of the interaction between institutional arrangements in developed countries and type of capital flows.

availability of capital at the relevant sources.⁵⁴ Institutional investors, such as pension funds and insurance funds, have been identified as an important new source of capital since they have long term investment horizons and could develop the ability to monitor and manage projects (see Lessard and Williamson (1985)). However, it is not clear why investments by these investors directly is preferred to intermediating funds from these institutions to MNCs, which then would invest in developing countries. It is that intermediation, first to MNCs and then to developing countries, increases the managerial control problem--and consequently direct intermediation is preferred--or can one design contracts between the MNC and the final lender which exploits the informational and other advantages of the MNC while minimizing the managerial control problem?⁵⁵ It is in any case clear that the international firm plays an important financial intermediation role, which has not been stressed to date.⁵⁶

e) Effects on the Balance of Payments.

Multinational firms investing both in the country where their parent companies are located and in countries where their affiliates operate, raise funds globally to finance fixed capital investment expenditures and other operations. Their capital expenditure decisions affect total capital formation in the developing countries where affiliates are located, and their financial decisions influence the external asset position of source and host countries. The intercompany flow of funds between parent and affiliate companies are recorded in the balance of payments of both countries and they are influenced by conditions in financial markets in industrial nations, as well as the degree of development of financial markets in developing countries. Taxation of international flows of capital, capital control policies in the source countries, and incentives for foreign investment in the host countries are further determinants of intercompany flow of funds.

The literature on financing and investment decisions of multinationals (see for instance Senbet (1979) and Shapiro (1978), and the literature on fund competing capital expenditure in various locations by multinational firms (see Lipsey and Stevens (1988)) has not yet accounted for the contribution of multinationals in the external asset position of countries. Various studies in the 1960s and 1970s have examined foreign direct investment and the balance of payments of industrial countries; they focused, however, mainly on the Voluntary Restraint Program which the U.S. launched in February 1965 (see Brimmer (1972), Kwack (1972), Prachowny (1972), and Boatwright and Renton (1975)).

⁵⁴ Even in the absence of any transactions costs, intermediation can be expected to remain imperfect--in the sense of not equalizing expected rates of return--in the presence of asymmetries in information between lender and borrower and related moral hazard problems.

⁵⁵ An interesting application of the benefits of an improvement of informational structure to debt-equity swaps is Errunza and Moreau (1989) where, because the multinational is better informed about the investment project than banks, debt-for-equity swaps can have some benefits for all.

⁵⁶ In general, the link between available sources of finance and the structure of a developing country's external finance has received little attention. One of the few papers in this area is Husain and Choi (1990). As a start, it would be very useful to look at how financial flows are intermediated on a worldwide scale. This could be done along the lines of a World Accounting Matrix as discussed in McCarthy (1988).

Balance of payment components for industrial countries with large direct investment in developing countries (U.S., U.K., Germany, France, and Japan), have seldom been analyzed chronologically and linked to various policies affecting capital outflows from industrial countries and incentives for foreign direct investment in developing countries. Lipsey (1987) provides an analysis of the growth of U.S. direct investment abroad after World War II.⁵⁷ He describes the changing characteristics of U.S.-owned foreign operations. He indicates, for example, that the export orientation of affiliates varies by location as well as by industry. He reports data on exports as percent of sales of majority owned foreign affiliates located in developed and developing countries. Similar analysis of FDI by some other OECD countries with large FDI-flows (U.K., The Netherlands, Germany, France, Japan) that traces developments in the balance of payments flows has not yet been done.

III. "Government Policies" in the Host or Source Country.

The third factor which influences the rate of return to the foreign investor is government policies in the host as well as the source countries. These policies include subsidies, tax holidays, differential tax structures, etc. Such factors can alter the level and return of foreign direct investment. We will discuss here non-tax incentive schemes and tax treatments (including tax incentive schemes).

a) Incentive Schemes

Most (developed and developing) countries have had at least one policy instrument in place which has raised the expected profit for foreign investors.⁵⁸ The impact of specific incentives in developing countries for attracting foreign direct investment flows is uncertain, however. Many studies suggest that incentives, and especially those that involve future promises, are largely ignored by investors. Guisinger et al. (1985) suggest that incentives play a relatively minor role in location decisions.⁵⁹ Other considerations (general investment climate) frequently rank above incentives. Host country sector specific policies are more important in influence allocation decisions of foreign investors. Non-tax distortions introduced by schemes in source countries, such as insurance on outward-foreign investment, could also influence investors when deciding where to locate (see Gubitz (1991)).

There appears to be some (largely anecdotal) evidence that host-country policies which involve large upfront payments are effective in attracting foreign investment. But it is unclear

⁵⁷ Detailed data and yearly developments for the U.S. are described in the Survey of Current Business.

⁵⁸ Guisinger, in Moran (1986), provides a classification of incentives and disincentives.

⁵⁹ It is the relatively attractiveness of the incentive scheme that matters, where relative is defined with respect to other countries. This opens the possibility of rounds of competitive bidding with no change of a country's relative share of total capital flows, but increasing benefits of the investors. Wheeler and Mody (1990) analyze this and find that in general "tournaments" for foreign investment are unnecessary and largely benefit the foreign investor. There is an important role for an international organization in curtailing incentives (and some of it is done through the United Nations Center on Transnational Corporations), however, this effort hinges on some mechanism to enforce agreements.

what the final economic benefits are for the host. Shapiro (1990), for instance, analyzes the case of the automobile industry in Brazil where state intervention led to the establishment of the domestic industry. She concludes that in this particular case the intervention had been successful. Warr (1989) studies whether export-processing zones attract foreign investment. He finds, however, that they do so but yield uncertain economic benefits to the host country; the up-front costs can be substantial and the economic spillover effects appear minimal.

b) Tax Treatments

Differences in tax structures and changes in tax structures alone do not explain a significant fraction of the capital flows experienced among developed countries in recent years. For developing countries, research results are mixed. Auerbach (1990) presents some theoretical analysis, with a focus on developing countries and finds that tax structures can be important. Slemrod (1990) concludes that the influences of differential tax regimes are not that easy to quantify.⁶⁰ Shah and Slemrod (1990) find that FDI flows to Mexico are sensitive to the Mexican and U.S. tax regimes. Similar results are found by Jun (1990) for FDI to and from the US, Froot (1990) for FDI from Japan, Froot and Stein (1990) for FDI from Japan to the US, Leechor and Mintz (1990) for the case of Thailand, and Mintz (1990).

Tax treatments, however, not only affect (gross) capital flows, but also investment, expenditures, and the type of financing decisions. Huizinga has found that international tax competition affects foreign investment incentives, and that tax treatment by national authorities affects R&D expenditures and product-innovating activities (Huizinga 1990a, forthcoming c, and 1989a). Tax regimes may also play an important role in the type of cross-border flows, as in the determination of the debt-equity ratio for individual firms in a country once the investment decision has been made (see, for instance, Huizinga (forthcoming a) and Errunza and Senbet (1981)). Hodder and Senbet (1990), however, derive the international analogy to Miller's debt and taxes equilibrium model and find that corporate tax policy plays a key role in generating an international capital structure, but does not affect the capital structure decisions of individual firms.

The main conclusion from the analysis of different government policies attract foreign investors is that they have only limited effect, especially when incentives can easily and without much cost be withdrawn or reduced by the host country.⁶¹

IV. Country Risk Factors

⁶⁰ An article which includes capital flows among developed as well as between developed and developing countries is Frankel and MacArthur (1988). This article concludes that there is a high degree of capital mobility among OECD countries, and that for other countries, with political risks premiums, expected currency depreciations explain interest differentials and financial markets are well integrated.

⁶¹ Grieco (1985) reports for instance that the tax rate on investments in the natural resource projects had increased by as much as 30 percentage points with several years after the initial investment agreement.

The fourth factor that influences the level and pattern of international capital flows is country risk. Before transferring capital, lenders need to assure themselves that debtors can and will repay. Penalties need to dissuade default, and good reputations need to be rewarded. The absence of an international bankruptcy court (and no modern equivalent of gunboat diplomacy) implies that penalties are difficult to impose and reputations are even more difficult to establish.

For TF, sovereign risks were for the first time explored in an analytical model by Eaton and Gersovitz (1981). They concentrate on the incentive for the borrower to retain access to international financial markets and in that way focus on the intertemporal costs of defaulting. This strand of the literature is surveyed by Eaton, Gersovitz and Stiglitz (1986) and Eaton (1990). Bulow and Rogoff (1989a, 1989b and 1989c) have stressed the importance of direct penalties, such as trade sanctions, that lenders can impose in cases of default. The weakness of most of these sovereign risk models is that they do not consider the tradeoff between different constituencies in the debtor country.

The relative empirical importance of each of the factors for determining ex-ante capital flows to and ex-post transfers from sovereign borrowers is still largely unknown, however. This means that the exact nature of the implicit contract between lenders and borrowers is not known, which imposes severe limitations on the kind of policy advice one can give regarding the contractual forms of the contracts that achieve a first-best outcome.

For AF, country risk has received less attention in the analytical and empirical literature. Lessard (1988 and 1989) and Lessard and Williamson (1985) have identified why country risk in AF differs from a public debt contract. These include: internal transfers are absent; default (opportunistic) is defined differently (in cases of foreign investment default can be partial and the result of exogenous shocks, actions by the government or a deliberate decision by the borrower); the project being financed may differ; the deadweight losses associated with default may be different (which changes the incentives to renegotiate); and the relative importance of AF has been less, possibly lowering default risk. We will focus on three issues: selective expropriation and reputation; assumption of private claims; and analytical modelling.

a) Selective Expropriation and Reputation

In most cases, private foreign investors have few or no links among each other, whereas sovereign lending banks typically have strong links. This means that a threat to stop lending would be more effective when made by sovereign lenders. Private creditors would find it difficult to coordinate among themselves. But private creditors could withhold technology and other inputs, or restrict future access to internationally developed know-how.

The absence of links among private creditors makes it easier for borrowers to default on one individual claimholder as well as default on one individual project (financed by several lenders who also finance other projects). This tends to influence the nature of the penalty for default and thus the implicit contract between borrower and lender (see, further, Eaton and Gersovitz 1984). For example, borrowers are likely to default on those projects where the

penalties are the smallest. Also, the host country government can evaluate the economic benefits and costs of defaulting on an individual project separately, and make the expropriation decision with respect to one creditor or one project alone.

Picht and Stuvén (1988) suggest, however, that governments seldom selectively expropriate, but instead expropriate across all sectors and industries. This is irrational from an economic point of view, since costs and benefits of expropriation are not equal across sectors and industries. Unselective behavior tends to be based on the "ideology" of the government, usually following elections or coups. If that were the case, however, one would expect the same behavior of the government with respect to debt obligations. Yet "joint" defaults on both forms of finance seems to be rare. This leaves some scope for substitution between TF and AF at the country level. Other (anecdotal) evidence (for instance, Eaton and Gersovitz (1984)) also suggests that some countries did expropriate selectively without adverse effect on their access to (other forms of) external capital.⁶²

This is not to say that there are no elements of spillover or externalities between the credibility of the different forms of external finance (i.e., the perceived likelihood that contracts will be fulfilled ex-post) which are important. In particular, the issue of how a government can establish credibility regarding all external contracts deserves attention. There appears, for example, to be a need for necessary "overshooting" (incurring an up-front costs) to gain credibility on all external contracts. Definitely, domestic concerns ("politics") will influence the credibility of contracts.

It should also be noted here that expropriation occurs along a continuum of policies that affect the ex-post return on investment. Creeping expropriation, acting on the earnings of a foreign investment, in the form of taxation, the negative influence of unions, domestic ownership requirements, etc., is hard to detect and it may be difficult therefore to measure expropriation in a correct way. Examples of some analytical work in this area are Huizinga (1990c and 1990b). He investigates the impact of labor unions on foreign investment patterns and find that these could negatively influence foreign investment.

b) Assumption of Private Claims

Assumption of external claims of a private borrower by the government in cases of default of the private borrower has occurred frequently. The governments of many Latin-American countries in the early 1980s were forced (or found it in their interest) to assume the external liabilities of private borrowers in their countries. Chile was typical in this respect. Presumably, the social costs of default were larger than the costs that could be imposed on the private borrower. Thus, under certain circumstances, the government could be justified in "bailing out" private debtors to prevent creditors from imposing penalties on the country as a whole.

⁶² There is some evidence that especially expropriation in the extractive industries is "excused" by other creditors.

Little analytical work has been devoted to this topic so far (one of the few papers is Eaton (1987)). Questions that could be explained further: what are the benefits to an international organization for settling investment disputes and claims among private entities in different countries (to prevent foreign creditors to impose costs such that the public sector assumes private claims);⁶³ what is the nature and importance of domestic property rights and contract enforcement; and what is the role of the government in screening and monitoring of private borrowings. The implications are large, since an increase in future private foreign investment without implicit or explicit government guarantees, will require a proper enforcement of contracts, domestically as well as internationally. Much may be learned from experiences of developed countries in enforcing cross-border private contracts.

c) Analytical Modeling of Country Risk

Recognition of the importance of country risk in influencing the level and pattern of AF can be traced back to at least Vernon (1971) (who coined the phrase "the obsolescing bargain"). However, only a few articles have dealt with this using analytical models. In contrast, it represents the core element in the literature on TF. Exceptions are the papers by Eaton and Gersovitz (1984 and 1986), Bond and Samuelson (1986 and 1989), Doyle and van Wijnbergen (1984), Cole and English (1988a and 1988b), Cohen and Michel (1990), Zhu (1990), Thomas and Worall (1990), and Huizinga (1990b). These articles investigate loss of reputation, loss of technology, and the credibility of tax holidays.

Loss of Reputation. Cole and English (1988a) extend the Eaton and Gersovitz (1981) analysis of sovereign reputation to international equity contracts. Equity contracts require different repayments in each state of nature than debt contracts. While the welfare benefits of future access to the international capital markets are identical to those of debt financing, default states are different for equity than for debt since the contractual repayments are different. Cole and English (1988b) extend their analysis to the case of two-sided sovereign default where two countries hold equity claims on each other as a means to share risks. They show that sovereignty does not prevent agents from holding a completely pooled portfolio, but prevents perfect ex-post risk-sharing because of the possibility of default. Also, individual investors may overinvest in the foreign country.

Loss of Technology and Know-How. Eaton and Gersovitz (1984) discuss the role of foreign technology in sustaining cross-border lending. They use a one-period model and assume that foreign technology is made available at the same moment the return on foreign capital is paid, ensuring incentive-compatibility. They show that foreign technology can allow for a broader range of contracts. As a result of the one-period setup, however, they are not able to

⁶³ The International Center for the Settlement of Investment Disputes (part of the Bank group) is such an organization. So far, little use has been made of this organization: 11 claims have been settled so far between the two parties and only 9 claims have given rise to awards. There was only one new case in FY1988/89. Another example of supranational judicial authority has been the transfer of the assessment of customs tariffs to a foreign firm by some developing countries in response to corruption in customs collection (example from Eaton (1990)).

analyze the dynamic properties of introducing technology in cross-border lending and whether time-inconsistencies may arise when foreign technology is made available before foreign capital is repaid. Cohen and Michel (1990) show that neither a consumption smoothing motive (the original Eaton and Gersovitz (1981) argument), or direct physical sanctions (the Bulow and Rogoff (1989a) argument) are necessary to sustain lending but that withholding future foreign technology can be an equilibrium that is dynamically consistent, i.e., neither one of the two parties finds in its interest to renege at any point in the future. In this way, they extend the one-period Eaton and Gersovitz (1984) period to an infinite horizon, perfect bargaining equilibrium. The article of Thomas and Worall (1990) is in this spirit too. Both articles find an important role for future technology in sustaining capital flows.

To the extent that developing countries have no or little intellectual property right protection--and that intellectual property is transferrable and thus expropriable--this will reduce or distort foreign investment. Only technology to be developed in the future can then serve as a deterrent to expropriation. Especially in light of the findings of the endogenous growth literature, where technology has spillover effects, preventing transfer of technology may therefore have serious consequences for future growth.

Tax Holidays. Doyle and van Wijnbergen (1984) theoretically show that, after an initial tax holiday, tax rates are likely to go up to the level where effectively all the benefits of the investment accrue to the host country. Bond and Samuelson (1986) suggest that tax holidays may need to be quite generous to attract foreign investment because they are reversible; otherwise the tax holiday may only serve as a signal of investment prospects, not as a monetary incentive. Huizinga (1990) shows that tax holidays may be a way for the government to convey an otherwise unobservable index of its impatience with the foreign investor. As foreign investment is augmented, the investor learns about the rate of impatience of the government, explaining the gradual diminishing tax holiday (increase in the tax rate). In general, however, policies that constitute the most efficient stimulus for foreign investment from the country's point of view, and at the same time are perceived to be credible promises by the foreign investors, have not been identified.

Further Modelling. There is scope for further analytical work on what constitutes a mutually acceptable, dynamically consistent cross-border private-to-private contract in the presence of fixed costs, technology and know-how transfers and a sovereign enforcing the contracts. To date, no analytical model explains why foreign investment does not flow in larger amounts to a number of developing countries in the presence of large differences in factor endowments and marked imperfections. The characteristics of these contracts should be derived in a sequential bargaining context and concepts developed in the literature on sovereign lending (Bulow and Rogoff (1989) and Fernandez and Rosenthal (1988)) will offer some direction here. The rapidly developing literature on credibility, commitments and economic policies (see Persson and Tabellini (1990) for an overview) will also provide some valuable inputs here.

5. SUMMARY

This paper has surveyed the literature on external financing for developing countries and identified several major gaps in the literature. Important areas where theoretical and empirical contributions to research on international financing could be made are the country risk aspects of AF; the incentive structures for, and restrictions on, AF; and the optimal participation modes in developing countries by international firms. The paper also draws implications for the policies of official creditors. The current literature offers little analytical support regarding the preferred forms of official creditors' own financial intermediation and their possible support role for private sector financing (co-financing, guarantees, privatization, and the achievement of the necessary comfort of adherence to private-to-private claims). Without a clear analysis of, for example, the differences between TF and AF, without knowing when either form is called for, or the implicit seniority status of these different claims, the official creditors may have difficulty defining their roles in these areas.

It would be useful therefore to study, analytically and empirically, the differences in country risk between TF and AF. This would help to better assess the type and amounts of future AF consistent with an (explicit or implicit) enforcement of contracts and the necessary institutional structure to assure a proper treatment of claims. Research on the issue of incentives and restrictions in the host country could focus on the efficiency of these schemes from the country's perspective and identify what the best incentive structures are to attract the desired volumes and types of foreign capital. This would help design better policies on domestic regulations, taxes, accounting, institutional structure, and performance incentives. Issues like the appropriateness of ownership and capital controls, the enforcement of private-to-private contracts, the monitoring of external private-to-private contracts, the decision to allow foreign banks to enter a country, the design of appropriate financial instruments, and the appropriateness of investment incentives should be addressed.

Research on the optimal participation modes in host countries by international firms could focus on the (optimal) capital structure of an MNC seeking financing from domestic and foreign capital markets, under the constraint that capital in the host country is mobile. The research could investigate how international firms should finance (and have been financing) themselves, and whether there have been shifts in these patterns; derive contracts that deal with moral hazard and sovereign risk problems; and discuss the intermediation role of MNCs and the possible restrictions a government should impose on private-to-private financing.

Research in these areas could assist the World Bank and other official creditors in defining their role in a world with increased capital mobility and global capital shortage, and would be consistent with their own increased emphasis on private sector development. This would help improve their policy advice, their own efficiency as intermediators, and their activities vis-a-vis private-to-private lending. Since these institutions are heavily involved in policy advice on domestic reforms often largely aimed at attracting foreign finance--either through developing appropriate instruments or by providing the necessary comfort to ensure adherence to performance requirements at the project level, they cannot afford to duplicate

systems in existence elsewhere and need to take into account the specific situations of developing countries.

6. REFERENCES

- Agtmael, Antoine W. van, *Emerging Secondary Markets*, Euromoney Publications, (1984).
- Aizenman, Joshua and Borenzstein, Eduardo, "Debt and Conditionality under Endogenous Term of Trade Adjustment", IMF Staff papers, 35, no. 4; 686-713.
- Arrau, Patricio, "How does the Debt Crisis Affect Investment and Growth: A Neoclassical Growth Model Applied to Mexico", PRE Working paper 378, April 1990
- Atkenson, Andrew. "International Lending with Moral Hazard and Risk of Repudiation." Mimeo, U. of Chicago (March, 1988): 1-30.
- Auerbach, Alan. "The Cost of Capital and Investment in Developing Countries." World Bank, PRE working paper 410, (April 1990): 1-43.
- Bernanke, Ben, and Gertler, Mark. "Agency Costs, Net Worth and Business Fluctuations," American Economic Review, (March 1989).
- Boatwright, B.D. and G.A. Renton (1975): "An Analysis of the United Kingdom Inflows and Outflows of Direct Foreign Investment," The Review of Economics and Statistics, 57, November, pp. 478-486.
- Bond, Eric, and Samuelson, Larry. "Tax Holidays as Signals." American Economic Review, 76 (September 1986): 820-26.
- Bond, Eric, and Samuelson, Larry. "Bargaining with Commitment, Choice of Technology, and Direct Foreign Investment." Journal of International Economics, 26 (1989): 77 - 97.
- Brimmer, Andrew (1972): "Direct Investment and Corporate Adjustment Techniques Under the Voluntary U.S. Balance of Payments Program." Journal of Finance, p. 266-282
- Bulow, Jeremy, and Rogoff, Kenneth. "A Constant Recontracting Model of Sovereign Debt," Journal of Political Economy, 97 (February 1989a): 155 - 178.
- Bulow, Jeremy, and Rogoff, Kenneth. "Multilateral Negotiations for Rescheduling Developing Country Debt." In *Analytical Issues in Debt*, edited by J. A. Frenkel, M. P. Dooley and P. Wickham, Washington, D.C.: International Monetary Fund, 1989b.
- Bulow, Jeremy, and Rogoff, Kenneth. "Sovereign Debt: Is Forgive to Forget?" American Economic Review, 79 (1989c): 43-50
- Caves, Richard. *Multinational Enterprise and Economic Analysis*. Cambridge: Cambridge University Press, 1982.

Claessens, Stijn and Ishac Diwan, "Investment Incentives: New Money, Debt Relief and the Critical Role of Conditionality in the Debt Crisis", World Bank Economic Review, vol 4, (1990), 21-42.

Cohen, Daniel, and Michel, Philippe. "Property Rights on Foreign Capital in a Growing Democracy." CEPREMAP, the (August 1990): 1-28.

Cole, Harold, and English, William. "Expropriation and Direct Investment." University of Pennsylvania, IERC working paper #10 (June 1989a): 1-35.

Cole, Harold, and English, William. "Two-Sided Sovereign Default and International Equity Contracts." University of Pennsylvania, IERC working paper #12 (August 1989b).

Cooper, Richard, and Sachs, Jeffrey. "Borrowing Abroad: The Debtor's Perspective," in G.Smith and J. Cuddington, eds. *International Debt and the Developing Countries*, the World Bank (1985): 21-60.

Diwan, Ishac and Santiago Galindez, *Country Funds*, Debt and International Finance Division, the World Bank (March 18, 1991).

Doyle, Christopher, and van Wijnbergen, Sweder. "Taxation of Foreign Multinationals: A Sequential Bargaining Approach to Tax Holidays." World Bank DRD working paper # 101 (September 1984): 1-33 and London School of Economics, CEPR Discussion paper # 25.

Dreyfuss, Jean-Francois, and Knopf, John. "Ownership Structure and Performance: A Review." Mimeo, New York University, (November 1988): 1-40).

Easterly, William, and Wetzel, Deborah. "Policy Determinants of Growth: Survey of Theory and Evidence." World Bank PRE working paper #343 (1989).

Eaton, Jonathan, and Gersovitz, Mark. "Debt with Potential Repudiation: Theoretical and Empirical Analysis." Review of Economic Studies, 48, (1981): 289-309.

Eaton, Jonathan, "Public Debt Guarantees and Private Capital Flight", World Bank Economic Review, Vol 1. No 3., (1987), 377-395.

Eaton, Jonathan, "Debt Relief and the International Enforcement of Loan Contracts", Journal of Economic Perspectives, Volume 4, No 1, Winter (1990), 43-56.

Eaton, Jonathan, and Gersovitz, Mark. "A Theory of Expropriation and Deviation from Perfect Capital Mobility." Economic Journal, 94 (March 1984): 16-40.

Eaton, Jonathan, Gersovitz, Mark, and Stiglitz, Joseph. "The Pure Theory of Country Risk." European Economic Review, 30, (1986)" 481-513.

Emerging Capital Markets Handbook, International Finance Corporation, 1989, 1990, and 1991.

Errunza, Vihang, and Moreau, Arthur. "Debt-for-Equity Swaps under a Rational Expectations Equilibrium." Journal of Finance, 44 (July 1989): 663-80.

Errunza, Vihang, and Lemma Senbet, "The Effects of International Operations on the Market Value of the Firm", Journal of Finance, XXVI, No. 2, (May 1981) 401-417.

Eun, Cheol, and Janakiramanan, S. "International Ownership Structure and the Firm Value." Mimeo, University of Maryland, (July 1990): 1-29.

Fama, Eugene. "Agency Problems and the Theory of the Firm." Journal of Political Economy, 88 (2, 1980).

Fernandez, Raquel, and Rosenthal, Robert. "Strategic Models of Sovereign-Debt Renegotiations", Review of Economic Studies, July 1990

Fishlow, Albert. "Foreign Loans, Debt and Economic Development in the 19th and 20th Century", background paper for WDR 1991

Frankel, Jeffrey, and MacArthur, Alan. "Political versus Currency Premia in International Real Interest Rate Differentials." European Economic Review, 32 (1988): 1083-1121.

Frenkel, Jacob, Razin, Assaf, and Sadka, *International Taxation*. (Forthcoming)

Froot, Kenneth. "Japan's Foreign Direct Investment." Mimeo, Debt and International Finance Division, the World Bank (April 1990): 1-31.

Froot, Kenneth and Jeremy Stein. "Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach." Quarterly Journal of Economics, 1991.

Froot, Kenneth, and Scharfstein, David, and Stein, Jeremy. "LDC Debt: Forgiveness, Indexation, and Investment Incentives." Journal of Finance (December 1989): 1335-50.

Gelb, Alan. "Financial Policies, Growth, and Efficiency." World Bank PPR working paper #202 (June 1989).

Gertler, Mark. "Financial Structure and Aggregate Economic Activity." Journal Money Credit and Banking, 20 (August 1988): 559-88.

Gertler, Mark and Kenneth Rogoff, "Domestic Country Borrowing and Domestic Wealth", mimeo, University of California, (1990)

Goldsbrough, D.J. (1979): "The Role of Foreign Direct Investment in the External Adjustment Process", IMF Staff papers, (26 December 1979) pp. 725-754

Graham, Edward and Paul Krugman, "Foreign Direct Investment in the United States", Institute for International Economics (1990)

Green, Joshua, and Delano Villanueva, "Private Investment in Developing Countries: An Empirical Analysis", IMF Working Paper, 90/40, (April 1990).

Grieco, J. "Foreign Direct Investment and Third World Development." Overseas Development Council (1985).

Grossman, Gene, and Helpman, Elhanan, "Trade, Innovation and Growth", American Economic Review, 80, (May 1990) pp. 86-91

Grossman, Gene, and Helpman, Elhanan, forthcoming, *Trade, Innovation and Growth*

Gubitz, Andrea, "Impact of Investment Policies on German Foreign Direct Investment Flows in Developing Countries: An Empirical Investigation", PRE Working Paper No. 718, the World Bank, (1991).

Guisinger, S. and Associates, *Investment Incentives and Performance Requirements*, New York: Praeger, 1985

Guisinger, S. in Theodore Moran, *Investing In Development: New Roles for Private Capital* (1986)

Helpman, Elhanan and Krugman, Paul. *Trade Policy and Market Structure*, Cambridge, MIT Press, 1989.

Hodder, James, and Lemma Senbet, "Agency Problems and International Capital Structure", in Pacific-Basin Capital Market Research Series, eds. S.O. Rhee and R.P. Chang, (1990).

Hodder, James, and Lemma Senbet, "International Capital Structure Equilibrium", Journal of Finance, Vol. 45, (Dec 1990) 1495-1516

Hofman, Bert and Helmut Reisen, "Debt Overhang, Liquidity Constraints and Adjustment Incentives", OECD Technical Paper no. 32, (October 1990)

Huizinga, Harry. "Foreign Investment Incentives and International Cross-Hauling of Capital." forthcoming a, Canadian Journal of Economics

_____. "Unions and the Taxation of Foreign Capital." Mimeo, Stanford University (November 1989): 1-16.

_____. "Unions, Taxes and the Structure of Multinational Enterprises." forthcoming b, Economic Letters

_____. "National Tax Policies Towards Product-Innovating Multinational Enterprises." forthcoming c, Journal of Public Economics

_____. "The Tax Treatment of R&D Expenditures of Multinational Enterprises." Mimeo, Stanford University (February 1990a): 1-21

_____. "Tax Holidays in a Continuous Time Model of Capital Adjustment." Mimeo, Stanford University (April 1990b): 1-24

Huizinga, H., "Foreign Ownership Restrictions and Withholding Taxes," Mimeo, Stanford University (1990c)

Husain, Ishrat, and Choi, Myung J., "Current Account Surplus in Asia and Its Recycling: A Preliminary Analysis", forthcoming in the papers and conference proceedings, "The Future of Asia-Pacific Economics."

IFC, *Trends in Private Investment in Thirty Developing Countries*, IFC Discussion Paper Number 6 (1989)

IMF, Occasional Staff Paper no. 33, *Foreign Private investment in Developing Countries*, (January 1985)

IMF, *World Economic Outlook*, Washington, D.C. (April 1989)

Jensen, Michael, and Meckling, William. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." Journal of Financial Economics 3 (October 1976): 305-60.

John, Kose, Senbet, Lemma, and Sundaram, Anant. "Multinational Enterprise Liability and Cross-Border Acquisitions." Mimeo, University of Maryland, (May 1990): 1-34.

Jones, Ronald, and Kenen, Peter. *Handbook of International Economics*. North-Holland, (1985)

Kletzer, Kenneth. "Sovereign Debt Renegotiation under Asymmetric Information," in J. Frenkel, M. Dooley and P. Wickham, ed., *Analytical Issues in Debt*, Washington, D.C., IMF (1989): 208-41.

Kletzer, Kenneth, Newbery, David, and Wright, Brian. "Financial Instruments for Smoothing the Consumption of Primary Commodity Exporters." PRE Working Paper, No. 558, the World Bank (June 1990): 1-48.

Krugman, "Increasing Returns and Economic Geography", Journal of Political Economy, 99, (June, 1991) pp. 483-499.

Kwack, Sung, " A Model of U.S. Direct Investment Abroad: A Neoclassical Approach," Western Economic Journal (1972) pp. 376-383.

Leechor, Chad, and Mintz, Jack. "Taxing Foreign Income in Capital-Importing Countries: Thailand's Perspective." World Bank PRE working paper #499 (September 1990): 1-97.

Lessard, Donald. "International Financing for Developing Countries: The Unfulfilled Promise", World Bank Staff Working Paper #792, World Bank, Washington, D.C.(1985)

Lessard, Donald. 1986, "North-South: The Implications for Multinational Banking", Journal of Banking and Finance 7, (1986), 521-36

Lessard, Donald. "Country Risks", in Courtenay, Stone et al, (eds) *Financial Risk: Theory, Evidence and Implications*, Kluwer Academic Publishers Press, Boston (1988)

Lessard, Donald. "Beyond The Debt Crisis: Alternative Forms of Financing Growth", in Husain, Ishrat and Ishac Diwan, *Dealing with the Debt Crisis*, World Bank, 1989

Lessard, Donald, and Williamson, John. *Financial Intermediation Beyond the Debt Crisis*. Policy Analysis in International Economics 12, Washington, D.C.: Institute of International Economics (1985)

Lessard, Donald, and Williamson, John. . *Capital flight and Third World Debt*, Washington, D.C.: Institute of International Economics 1987

Lipsey, Robert: "Changing Patterns of International Investment in and by the United States," NBER, Working Paper, No. 2240, (May 1987)

Lipsey, Robert and Guy Stevens. "Interaction Between Foreign and Domestic Investment." Board of Governors, Federal Reserve System, International Finance Discussion Paper No. 329, August 1988.

Lizondo, J. Saul, "Foreign Direct Investment", IMF, Working Paper, WP/90/63, (July 1990)

McCarthy, Desmond, "Global Accounting Framework", GAF Working Paper no 1, International Economics Department, The World Bank, (October 1988)

Mintz, Jack, "Corporate Tax Holidays and Investment", World Bank Economic Review, Vol 4, No 2 (January 1990) 81-102

Myers, S.C. "Determinants of Corporate Borrowing." Journal of Financial Economics, 5 (1977): 147-75.

Oman, Charles: *New Forms of International Investment in Developing Countries*, OECD, Development Center Studies, (1984)

Persson, T. and G. Tabellini. *Macroeconomics, Credibility and Politics*, forthcoming, Harwood Academic Press.

Picht, Hartmut and Volker Stüven. "Selective and Unspecific Expropriation of Foreign Direct Investment: Evidence and Implications for the Debt Crisis", Kiel Institute of World Economics, Working Paper No. 344, (1989)

Prachowny, Martin: "Direct Investment and the Balance of Payments of the United States: A Portfolio Approach," in F. Machlup, W. Salant and L. Tarshia (eds.): *International Mobility and Movement of Capital*, New York, NBER. (1972)

Serven, Luis and Andres Solimano, "Economic Adjustment and Investment Performance in Developing Countries: The Experience of the 1980s", presented at the Conference on Private Investment and Macroeconomic Adjustment, (March 21-22, 1991a), World Bank

Serven, Luis and Andres Solimano "Private Investment and Macroeconomic Adjustment: A Survey", The World Bank Research Observer (1991b)

Senbet, Lemma: "International Capital Market Equilibrium and the Multinational Firm Financing and Investment Policies." Journal of Financial and Quantitative Analysis, Vol. XIV. No.3, (September 1979) pp. 455-481.

Shah, Anwar, and Slemrod, Joel. "Tax Sensitivity of Foreign Direct Investment: An Empirical Assessment." World Bank, PRE Working Paper #434 (June 1990): 1-41.

Shapiro, Allan: "Financial Structure and Cost of Capital in the Multinational Corporation," Journal of Financial and Quantitative Analysis, (June 1978) pp. 211-226.

Shapiro, Helen, "Rent-Seeking or Rent-Distribution? Automobile Firms and the Brazilian State 1956-1968", mimeo, Harvard Business School (1990)

Shariff, Karim, "Macroeconomic Policy, Performance and Private Investment", PRE Working Paper, the World Bank (August 1990)

Slemrod, Joel. "A North-South Model of Taxation and Capital Flows", NBER Working Paper.

Smith, Clifford, and Warner, Jerold. "On Financial Contracting: An Analysis of Bond Covenants." Journal of Finance, 7 (1979).

Spiegel, Mark. "Threshold Effects in International Lending." World Bank, PRE working paper #394 (April 1990).

Thomas, Jonathan and Tim Worall, "Foreign Direct Investment and the Risk of Expropriation", Warwick Economic Research Papers, No. 342, (January 1990)

Vernon, R. *Sovereignty at Bay: The Multinational Spread of United States Enterprises*, New York: Basic Books, (1971)

U.S. Department of Commerce, BEA, U.S. Direct Investment Abroad: Benchmark Survey Data, (December 1985)

_____ : Survey of Current Business: "U.S. Direct Investment Abroad: Detail for Position and Balance of Payment Flows," Yearly Articles.

_____ : Survey of Current Business: "U.S. Direct Investment Abroad: Operations of U.S. Parents and Their Foreign Affiliates," Yearly Articles.

_____ : Sources and Uses of Funds of Majority-Owned Foreign Affiliates of U.S. Companies 1973-76. Staff Paper 79-033 (1979)

Warr, Peter. "Export Processing Zone: The Economics of Enclave Manufacturing." World Bank Research Observer, 4 (January 1989): 65-88.

Wheeler, David and Ashoka Mody, "Risks and Rewards in International Location Tournament: The Case of US Firms", Industry Series Paper, IEN, The World Bank, (June 1990)

Williams, E., "The Extent and Significance of the Nationalization of Foreign Owned Assets in Developing Countries", Oxford Economic Papers, 27, 260-173 (1975)

World Bank, *World Debt Tables, 1990-1991*, Volume 1, Analysis and Summary Tables (1990/91)

World Bank, *Global Economic Prospects and the Developing Countries*, May 1991.

World Bank, *World Development Report*, 1985, 1989 and 1991.

Zhu, Ning. "Foreign Direct Investment with Expropriation Risk and Learning." Mimeo, Debt and International Finance Division, the World Bank (October 1990).

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